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10/023,960	12/17/2001	**Shahid Mujtaba**	10013648 -1	6641

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EXAMINER	
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ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/023,960
Filing Date: December 17, 2001
Appellant(s): MUJTABA ET AL.

John P. Wagner
Reg. No. 35,398
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 18, 2008 appealing from the Office action mailed October 18, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct in part.

NEW GROUND(S) OF REJECTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-2 and 5-11 are rejected under 35 U.S.C. 101 because 1 recites a process that is directed towards non-statutory subject matter.

In order for a method to be considered a "process" under §101, a claimed process must either: (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials). *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972). If neither of these requirements is met by the claim, the method is not a patent eligible process under §101 and is non-statutory subject matter.

Claims 1-2 and 5-11 recite a "computer implemented method" which fails to (1) be tied to another statutory class and (2) transform underlying subject matter. Although the claims recite a "computer implemented" method, this is just a nominal recitation of a physical structure and fails to satisfy the statutory requirements. A mere recitation of a computer in the preamble fails to satisfy this requirement. See *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v.*

Benson, 409 U.S. 63, 70 (1972). Furthermore, no transformation of any physical object is completed during the recitation of the present invention. As such, the present invention is directed towards non-statutory subject matter and is rejected under 35 U.S.C. 101.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,151,582 Huang et al. 11-2000

Zussman, Eyal, "Planning of Disassembly Systems", Assemble Automation, 1995

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 101

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 5-17, 20-26 and 29-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. (U.S Patent No. 6151582) in view of Zussman (Zussman, Eyal; "Planning of Disassembly Systems", *Assemble Automation*, 1995).

As per claim 1, Huang teaches:

A computer implemented method for defining an optimal integrated action plan for procurement, manufacturing, and marketing comprising:

a) accessing materials planning parameters (see column 13 lines 9-67 - column 14 lines 1-19, column 19 lines 32-67- column 99 lines 1-4, and column 107 lines 36-67 – column 112 lines 1-20; where the aggregate production planning system accesses material planning parameters in the system);

b) accessing pricing parameters (see column 19 lines 63-67 – column 24 lines 1-48 and column 39 lines 60-67 – column 90 lines 1-53; where the forecasting module incorporates market data, including inventory costs, raw material costs, delivery costs, product sales price, and promotional discounts in to optimizing the decision management system); and

c) evaluating said materials planning parameters and said pricing parameters in conjunction to define said integrated action plan (see column 27 lines 1-67 – column 99 lines 1-4; where the system evaluates market data, sales data, materials data, inventory data, and production data to determine a plan).

Although Huang teaches a system and method for procurement, manufacturing, and marketing where the system can be controlled to account for different stages of the product production, Huang fails to explicitly teach a system that accounts for end of product life situations. Zussman, in an analogous art, teaches planning for end of product life (see Zussman pp. 21-23; where an end of life value is determined in order to determine the viable options available at the end of the life of a product.). The

advantage of being able to account for end of product life situations is that it allows the production plan to eventually stop producing finished products and thereby minimizing finished product inventory on-hand. It would be desirable to modify Huang to specifically account for end of product life scenarios because then Huang could uniformly handle the end of product life scenarios. Furthermore, the recited limitations and steps do not differentiate between any stages of a product life and the end of a product life. The recited steps merely state that the steps are for an end of product life without explicitly limiting the steps to an end of product life. Thus, it would be within the ordinary skill in the art to use the disclosure of Huang towards an end of product life stage of a product. It would have been obvious, at the time of the invention, for one of ordinary skill in the art to incorporate the feature of accounting for the end of a product life taught by Zussman to the Huang system's inventory policies to minimum to account for end of product life situations in order to eventually cease production of the product and minimize the finished product inventory level, which is a goal of Zussman (see abstract).

As per claim 2, Huang teaches:

The method as recited in claim 1, wherein said integrated action plan comprises:

a build plan, a procurement plan, and a sales and pricing plan (column 13 lines 9-67 – column 14 lines 1-19, column 19 lines 32-67 – column 99 lines 1-4, and column 107 lines 36-67 – column 112 lines 1-20; where the system generates a master production plan (build plan), a materials requirement plan, and a sales and pricing plan. The materials requirement plan incorporates the need to procure critical components from vendors. The system reconciles forecast and profit data to determine a sales plan. The system also determines a pricing plan based on the input from all of the modules.).

As per claim 5, Huang teaches:

The method as recited in claim 1, wherein said materials planning parameters comprise:

bill of material, and inventory (see column 13 lines 9-67 – column 14 lines 1-4, column 27 lines 1-67 – column 28 lines 1-24, and figure 67; where the materials planning uses a bill of materials and manages an inventory.).

Claim 5 further recites the limitation of "end of product life" which has already been addressed by the rejection of claim 1; therefore the same rejection applies to this claim.

As per claim 6, Huang teaches:

The method as recited in claim 1, wherein said pricing parameters comprise:

a parameterized demand curve formed using a pricing information generating technique (see column 12 lines 51-67 – column 13 lines 1-7, column 18 lines 7-67 – column 25 lines 1-5, and figures 11, 12, 14, 56, and 57; where the demand management uses sales forecasts and marketing data to create demand parameters, including forecasted sales volumes, costs, and finished product prices. Parameterized demand curve in the present invention is defined as the evaluation of sales information to create a distinct marketing goal (see specification p. 10 lines 6-14).).

Claim 6 further recites the limitation of "end of product life" which has already been addressed by the rejection of claim 1; therefore the same rejection applies to this claim.

As per claim 7, Huang teaches:

The method as recited in claim 1, wherein said evaluating said materials planning parameters and said pricing parameters is done via an optimization engine employing a mathematical programming model and technique (see column 61 lines 27-67 – column 99 lines 1-4; where materials planning and pricing parameters is done via optimization using linear programming.).

Claim 7 further recites the limitation of "end of product life" which has already been addressed by the rejection of claim 1; therefore the same rejection applies to this claim.

As per claim 8, Huang teaches:

The method as recited in claim 7, wherein the goal of said optimization engine is maximization of product gross profit (see column 61 lines 27-67 – column 99 lines 1-4; where the system optimizes sales and production costs (revenue and costs) to ultimately determine product gross profit.).

As per claim 9, Huang teaches:

The method as recited in claim 7, wherein the goal of said optimization engine is optimizing the trade-off between product gross profit maximization and inventory write-off cost minimization (see column 61 lines 27-67 – column 99 lines 1-4; where the system optimizes sales and production costs (revenue and costs) to ultimately determine product net profit.).

As per claim 10, Huang teaches:

The method as recited in claim 7, wherein business rules are applied to said optimization engine (see column 61 lines 27-67 – column 99 lines 1-4; where constraints are used in the linear programming. Business rules are defined as constraints (see specification p. 13 lines 23-27).).

As per claim 11, Huang teaches:

The method as recited in claim 10, wherein said business rules comprise:

objectives, budgets, parts procurement limits, and build capacity (see column 13 lines 9-67 – column 14 lines 1-4 and column 19 lines 63-67 – column 24 lines 1-48; where budgets, key parts procurement, production capacity, and other costs are constraints in the linear programming optimization of the production plan. Objectives are business rules, where business rules are constraints (see specification p. 13 lines 23-27).).

As per claim 12, Huang teaches:

A computer system comprising:

a bus (see column 102 lines 30-67 – column 103 lines 1-35; where the server requires maximum speed, storage space, memory and network connectivity. These elements are connected by a bus.);

a memory unit coupled to said bus (see column 102 lines 30-67 – column 103 lines 1-35; where the server requires maximum speed, storage space, memory and network connectivity. These elements are connected by a bus.); and

a processor coupled to said bus, said processor for executing a method for defining an optimal integrated action plan for procurement, manufacturing, and marketing comprising (see column 102 lines 30-67 – column 103 lines 1-35 ; where the server requires maximum speed, storage space, memory and network connectivity. These elements are connected by a bus.):

Claim 12 further recites limitations already addressed by the rejection of claim 1; therefore the same rejection applies to this claim.

Claim 13 recites limitations already addressed by the rejection of claim 9; therefore the same rejection applies to this claim.

Claim 14 recites limitations already addressed by the rejection of claim 10; therefore the same rejection applies to this claim.

Claim 15 recites limitations already addressed by the rejection of claim 11; therefore the same rejection applies to this claim.

As per claim 16, Huang teaches:

The computer system of claim 15, wherein said objectives comprise:

revenue, write-off, and profit (see column 13 lines 9-67 – column 14 lines 1-4 and column 19 lines 63-67 – column 24 lines 1-48; where budgets, key parts procurement, production capacity, and other costs are constraints in the linear programming optimization of the production plan. Objectives are business rules, where business rules are constraints (see specification p. 13 lines 23-27).).

Claim 17 recites limitations already addressed by the rejection of claim 2; therefore the same rejection applies to this claim.

As per claim 20, Huang teaches:

The computer system of claim 17, wherein said integrated action plan is further comprised of metrics (see column 19 lines 32-67 – column 99 lines 1-4; where the system accounts for revenue, inventory write-off, profit, and competitor pricing.).

As per claim 21, Huang teaches:

The computer system of claim 20, wherein said metrics comprise:

revenue, write-off, profit, and shadow prices (see column 19 lines 32-67 – column 99 lines 1-4; where the system accounts for revenue, inventory write-off, profit, and competitor pricing. For the purposes of examination, shadow prices are interpreted to mean prices offered by other competitors.).

As per claim 22, Huang teaches:

The computer system of claim 12, wherein said pricing parameters are obtained from a discrete said parameterized demand curve (see column 12 lines 51-67 – column 13 lines 1-7, column 18 lines 7-67 – column 25 lines 1-5, and figures 11, 12, 14, 56, and 57; where the demand management uses sales forecasts and marketing data to create demand parameters, including forecasted sales volumes, costs, and finished product prices. Based on the linear programming and mixed integer linear programming models, these parameters can be set as variables or actual values can be placed in to the variables, thus making the demand curve discrete or continuous. Different models are proposed for parameters that fluctuate and for those parameters are that are static as well. Parameterized demand curve in the present

invention is defined as the evaluation of sales information to create a distinct marketing goal (see specification p. 10 lines 6-14).).

Claim 22 further recites the limitation of "end of product life" which is addressed in the rejection of claim 1; therefore the same rejection applies to this claim.

As per claim 23, Huang teaches:

The computer system of claim 12, wherein said pricing parameters are obtained from a continuous said parameterized demand curve (see column 12 lines 51-67 – column 13 lines 1-7, column 18 lines 7-67 – column 25 lines 1-5, and figures 11, 12, 14, 56, and 57; where the demand management uses sales forecasts and marketing data to create demand parameters, including forecasted sales volumes, costs, and finished product prices. Based on the linear programming and mixed integer linear programming models, these parameters can be set as variables or actual values can be placed in to the variables, thus making the demand curve discrete or continuous. Different models are proposed for parameters that fluctuate and for those parameters are that are static as well. Parameterized demand curve in the present invention is defined as the evaluation of sales information to create a distinct marketing goal (see specification p. 10 lines 6-14).).

As per claim 24, Huang teaches:

The computer system of claim 12, wherein said mathematical programming model and technique is obtained from the family of mathematical programming models and techniques comprising:

mixed integer models, linear models, non-linear models, and techniques such as simplex methods, interior point methods, branch and bound (cut), constraint programming, and meta-heuristics (see column 61 lines 27-67 – column 99 lines 1-4; where the optimization is done using linear programming and mixed integer linear programming.).

As per claims 25-26 and 29-35, Huang teaches a "computer-readable program code" (see column 13 lines 9-67 – column 14 lines 1-4, column 27 lines 1-67 – column 28 lines 1-24, column 102 lines 30-67 – column 103 lines 1-35 and figure 67; the system parameters and constraints are embedded in a computer-readable program). Claims 25-26 and 29-35 further recite limitations already addressed by the rejection of claims 1-2 and 5-11; therefore the same rejections apply to these claims.

(10) Response to Argument

Appellants argue Huang and Zussman fail to teach the "end of product life integrated action plan for procurement, manufacturing, and marketing" (see Appeal Brief p. 12).

Examiner submits that Huang teaches developing an integrated action plan for procurement, manufacturing, and marketing (see Huang column 13 lines 9-67 - column 14 lines 1-19, including column 13 lines 15-23: "The planning process then becomes a continuous effort to update the existing PSI plan to accommodate the changes in the requirements before and after a series of monthly PSI planning meetings whose participants include decision makers representing all key functional areas at the enterprise. The meetings integrate the inputs from various sources...in order to reconcile, develop, and approve a new set of feasible sales, production and inventory requirements."). Huang explicitly teaches integrating procurement (see Huang column 13 line 46-49; "The process involves component procurement and factory production planning..."), manufacturing (see Huang column 13 lines 45-49; "Supply Management is a process to determine the production (supply) plan to me the production (supply) requirements..."), and marketing (see Huang column 13 lines 1-6, "For key customers, develop customer-specific sales forecasts based on historical shipment and sell-through data. Link POS data where available to historical promotion information to analyze the real impact of promotion activities on demand..."). Managing production planning information is the same as managing manufacturing planning and determining promotion information is the same as marketing.

As discussed above, Huang explicitly teaches each of the terms recited in the claim language, except for the terms "end of product life". Examiner provides Zussman to only teach this limitation. Zussman teaches "end of product life" (see Zussman pp. 21-23; where an end of life value is determined in order to determine the viable options

available at the end of the life of a product.). Examiner submits that this recitation of the term "end of product life" in the context of the recite claim calls for nothing more than a teaching of how to handle a product at the end of the product's life. No additional limitations should be read into this recitation and as such Zussman explicitly teaches this. Thus, Huang explicitly teaches the development of a plan including all of the limitations set forth in the claim language and Zussman teaches applying an action plan to handle the end of a product's life. In light of these two references, the present invention is rendered obvious.

It would be desirable to modify Huang to specifically account for end of product life scenarios because then Huang could uniformly handle the end of product life scenarios. Furthermore, the recited limitations and steps do not differentiate between any stages of a product life and the end of a product life. The recited steps merely state that the steps are for an end of product life without explicitly limiting the steps to an end of product life. Thus, it would be within the ordinary skill in the art to use the disclosure of Huang towards an end of product life stage of a product. It would have been obvious, at the time of the invention, for one of ordinary skill in the art to incorporate the feature of accounting for the end of a product life taught by Zussman to the Huang system's inventory policies to minimum to account for end of product life situations in order to eventually cease production of the product and minimize the finished product inventory level, which is a goal of Zussman (see abstract).

Applicants' additionally argue that the Examiner has failed to give weight to specific terms and terms in the preamble, however, as discussed above, Examiner has given weight to all terms in the recited claim language.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section **(9)** above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to

reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

/Jeffrey A. Smith/
Supervisory Patent Examiner, Art Unit 3625

A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:

/Wynn W. Coggins/

Director, TC 3600

Conferees:

/J. A. S./

Supervisory Patent Examiner, Art Unit 3625

Jeffrey A. Smith
SPE AU 3625

Vincent Millin /VM/
Appeals Conference Specialist